

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of: Fransiscus G.C. VERWEG et al. **Atty. Docket:** NL 020718

Serial No.: 10/510,302

Group Art Unit: 2841

Filed: October 6, 2004

Confirmation No.: 6530

For: ELECTRICALLY INSULATING BODY, AND ELECTRONIC DEVICE

Mail Stop **Appeal Brief -- Patents**

Commissioner For Patents

P.O. Box 1450

Alexandria, VA 22313-1450

APPELLANT'S BRIEF PURSUANT TO 37 C.F.R. § 41.37

Real Party in Interest:

The real party in interest in this application is KONINKLIJKE PHILIPS ELECTRONICS N.V., the assignee of the inventor's interests in this invention.

Related Appeals and Interferences:

There are no other appeals and/or interferences related to this application.

Status of Claims:

Claims 1-12 stand finally rejected by the Examiner. Claim 13 has not been rejected. The appealed claims are set forth in the attached Appendix.

Status of Amendments:

Appellant's Amendment dated December 21, 2006, was entered by the Examiner. Appellant's Response AF dated March 12, 2007, did not amend the claims. The appealed claims are set forth in the attached Appendix.

Summary of Claimed Subject Matter:

The claimed invention generally relates to

an electric insulating body (2) provided with a conductor pattern (1) and an electronic device (10) comprising such a body (2) and at least one electronic element (30). According to the invention, the body (2) has first and second faces (2A, 2B) in between of which an angle of less than 180 degrees is defined, wherein the conductor pattern (1) of the body (2) extends over both faces (2A, 2B), which body (2) carries both the conductor pattern (1) and the electronic element (30). The conductor pattern (1) comprises strip-shaped regions (1A) and regions (1B) with a larger width than the strip-shaped regions (1A), which regions (1B) are suitable for electrically contacting the electronic element (30). The electronic element (30) is, for example, a camera. The device (10) with such a camera is

particularly suitable for use in a mobile communication apparatus.

(present application as published (see US 2005/0142917 A1) at Abstract and Figure 1).

In particular, claim 1 of the present application recites:

An electrically insulating body provided with a conductor pattern, **which insulating body is provided with a first and a second side between which an enclosed angle is present of substantially less than 180 degrees**, wherein **the conductor pattern extends over and is recessed in the first and the second side** and, wherein the conductor pattern comprises a number of strip-shaped conductors provided each with at least one region of larger dimensions than the width of the strip-shaped conductors, which regions are suitable for electrical contacting of electronic elements to be assembled together with the insulating body, said body acting as a carrier of the conductor pattern and as a carrier of the elements.

(emphasis added).

As illustrated in, for example, Figure 1 of the present application as published (shown below), claim 1 recites an "insulating body" (2) provided with a "first and a second side" (2A and 2B respectively). In Figure 1 of the present application, the first side (2A) and the second side (2B) of the insulating body enclose an angle of about 90 degrees. In accordance with this figure, claim 1 of the present application recites that between the first side (2A) and the second side (2B) "an enclosed angle is present of substantially less than 180 degrees." It should also be noted that one of ordinary skill in the art would understand an "insulating body," (2) as recited in claim 1, to be a body or object that provides electrical insulation. As is known to those of skill in the art, electrical insulators are generally characterized as being poor conductors of electricity. In contrast to, for example, a printed circuit board, the claimed "insulating body" "is not planar, but is substantially block-shaped. (Present application as published at paragraph [0010]).

Claim 1 further recites a "conductor pattern" (1) that "extends over and is recessed in the first and second side." As is known to those of skill in the art, a "conductor" or a "conductor pattern" is an object or region that is generally a good conductor of electricity.

Thus, as is recited by claim 1 of the present application, a "conductor pattern" "extends over and is recessed in the first and second side[s]" of the "insulating body."

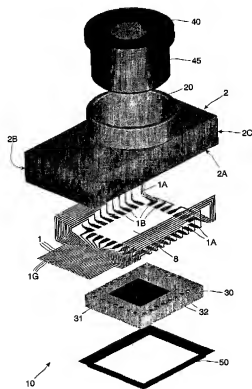


Figure 1 of the present application.

Claim 1 of the present application further recites that "the conductor pattern comprises a number of strip-shaped conductors" (1A) that is "provided each with at least one region of larger dimensions than the width of the strip-shaped conductors" (1B). The "regions are suitable for electrical contacting of electronic elements to be assembled together with the insulating body, said body acting as a carrier of the conductor pattern

and as a carrier of the elements." (See present application as published at paragraphs [0009] and [0010]).

Thus, with the claimed "conductor pattern" that "extends over and is recessed in the first and second side[s]" of the "insulating body," the "presence of the conductor pattern in the cavity ensures a simple electrical contacting. This is favorable, for example, for components such as a speaker and a buzzer for a mobile telephone." (See present application as published at paragraph [0013]).

Claim 9 recites:

An electronic device provided with an electronic element
and with an electrically insulating body provided with a
conductor pattern as claimed in claim 1.

Thus, claim 9 is directed to an electronic device provided with an electronic element and with an electrically insulating body as described above with respect to claim 1.

Claim 12 recites:

An apparatus for mobile communication provided with an
electronic device as claimed in claim 9.

Thus, claim 12 is directed to an apparatus for mobile communication, such as, for example, a cell phone, with an electronic device as recited by claim 9.

Thus, the claimed invention is generally directed to an electrically insulating body provided with a conductor pattern, which insulating body is provided with a first and a second side between which an enclosed angle is present of substantially less than 180 degrees, wherein the conductor pattern extends over and is recessed in the first and the second side. The conductor pattern comprises a number of strip-shaped conductors provided each with at least one region of larger dimensions than the width of the strip-shaped conductors, which regions are suitable for electrical contacting of electronic elements to be assembled together with the insulating body, said body acting as a carrier of the conductor pattern and as a carrier of the elements.

Grounds of Rejection To Be Reviewed

The grounds of rejection to be reviewed are:

- 1) Whether claims 1-9 are unpatentable under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,440,452 (Kitahara).
- 2) Whether claims 10-12 are unpatentable under 35 U.S.C. 103(a) over Kitahara in view of U.S. Patent No. 6,486,412 (Kato).

Argument

Appellants respectfully submit that claims 1-12 are in proper form and are patentable over the prior art of record.

1. Kitahara Does Not Anticipate the Inventions of Claims 1-9

Claims 1-9 are rejected under 35 U.S.C. § 102(b) as being anticipated by Zehner. Claims 1-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Kitahara.

Appellants assert that claims 1-9 are patentable over Kitahara because Appellants contend that Kitahara discloses a different device from what is claimed in those claims. Appellants further contend that the Examiner, when rejecting claims 1-9 under 35 U.S.C. § 102(b), failed to give weight to express limitations of the claims that are not disclosed, taught or suggested by Kitahara. "A prior art reference anticipates a claim only if the reference discloses, either expressly or inherently, every limitation of the claim Absence from the reference of any claimed element negates anticipation." Rowe v Dror, 112 F3d 473, 478 (Fed. Cir. 1997).

Appellants submit that claim 1 is not anticipated by Kitahara at least because claim 1 recites, "wherein the conductor pattern extends over and is recessed in

the first and the second side.” Nowhere does Kitahara teach or suggest a recessed conductor pattern in a first and second side of an insulating body as recited in claim 1. In contrast, Kitahara discloses a lead 3 that rests on top of a frame 4 (see Kitahara, Fig. 16, a copy of which is provided below). Because Kitahara does not teach or suggest a conductor pattern extending over and being recessed in a first and second side of an insulating body, as recited in claim 1, Kitahara does not teach every element of claim 1 and claim 1 is therefore not anticipated by Kitahara. Accordingly, appellants respectfully request reversal of the Examiner's rejection to claim 1.

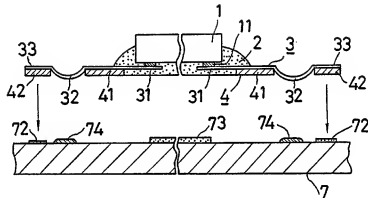


Figure 16 of Kitahara

In the Office Action, the Examiner points to element 4 of Fig. 16 of Kitahara as the claimed "insulating body" of the present application. The Office Action does not, however, point to any portion of element 4 of Fig. 16 of Kitahara in which an "insulating body" has a "first and second side between which an enclosed angle is present of substantially less than 180 degrees," as claimed by the present application. Indeed, while the Office Action points to lead 3 of Fig. 35 of Kitahara as being folded into a circular arc (of less than 180 degrees), lead 3 is a conductor, and is not equivalent to the

claimed "insulating body" of the present application. In addition, the Office action does not point to any portion of Kitahara in which element 4 of Fig. 16 of Kitahara (being used in the Office Action as an insulating body) has a "first and second side between which an enclosed angle is present of substantially less than 180 degrees."

Moreover, while the Office Action points to Fig. 16 of Kitahara as having a bent conductor, the bent conductor of Fig. 16 of Kitahara is not described or shown as a "conductor pattern [that] extends over and is recessed in the first and the second side" of an "insulating body" that has a "first and second side between which an enclosed angle is present of substantially less than 180 degrees."

In an Advisory Action, dated June 26, 2007, the Examiner also points to Fig. 46 (a) of Kitahara (a copy of which is provided below) wherein an IC package (12) is prepared using a lead frame, and where the IC package has die pad supports (37).

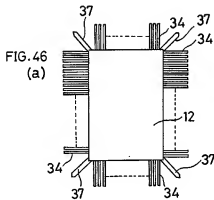


Figure 46(a) of Kitahara

Appellants submit, however, that the IC package of figure 46(a) of Kitahara is not described or shown as a "conductor pattern [that] extends over and is recessed in the first and the second side" of an "insulating body" that has a "first and

second side between which an enclosed angle is present of substantially less than 180 degrees."

Accordingly, Appellants assert that Kitahara fails to disclose all the elements of claim 1, and appellants further assert that the Examiner failed to properly consider the described claim limitations in the rejection.

Moreover, Kitahara does not teach or suggest the claimed "conductor pattern [that] extends over and is recessed in the first and the second side" of an "insulating body" that has a "first and second side between which an enclosed angle is present of substantially less than 180 degrees" in combination with the recited features of wherein the "conductor pattern comprises a number of strip-shaped conductors provided each with at least one region of larger dimensions than the width of the strip-shaped conductors, which regions are suitable for electrical contacting of electronic elements to be assembled together with the insulating body, said body acting as a carrier of the conductor pattern and as a carrier of the elements."

Claims 2-9 each ultimately depend from claim 1 and are therefore not anticipated by Kitahara for at least the reason discussed above with respect to claim 1. Accordingly, appellants respectfully submit that claims 2-9 are in condition for allowance and request reversal of the Examiner's rejections to those claims.

Accordingly, for the reasons stated above, appellants believe that the Examiner's rejections of claims 1-9 under 35 U.S.C. § 102(b) should be reversed and such action is respectfully requested.

**2. Kato in view of Kitahara Does Not Make Obvious the
Inventions of Claims 10-12**

Claims 10-12 are rejected as obvious under 35 U.S.C. 103(a) over Kitahara in view of Kato.

As set forth in MPEP §2143, a prima facie case of obviousness requires that "prior art reference (or references when combined) must teach or suggest all the claim limitations." See, e.g., In re Royka, 180 USPQ 580 (CCPA 1974).

Claims 10 and 12 depend from claim 9, which depends from claim 1. Claim 11, in turn, depends from claim 10. Claim 13 depends from claim 4, which depends from claim 2, which depends from claim 1.

Therefore, claims 10-12 are not taught or suggested by Kitahara for at least the reason discussed above with respect to claim 1. Kato does not cure the deficiencies of Kato. Therefore, claims 10-12 are not taught or suggested by Kitahara or Kato, either taken alone, or in combination, for at least the reason discussed above with respect to claim 1.

Accordingly, appellants respectfully submit that claims 10-12 are in condition for allowance and request reversal of the Examiner's rejections to those claims.

Appellants note that claim 13 has not been rejected in the Final Office Action. Accordingly, appellants believe that the Examiner has deemed claim 13 to be allowable.

In view of the foregoing, the Final Rejection of the claims should be reversed.

Respectfully submitted,

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Claims Appendix:

1. (Previously Presented) An electrically insulating body provided with a conductor pattern, which insulating body is provided with a first and a second side between which an enclosed angle is present of substantially less than 180 degrees, wherein the conductor pattern extends over and is recessed in the first and the second side and, wherein the conductor pattern comprises a number of strip-shaped conductors provided each with at least one region of larger dimensions than the width of the strip-shaped conductors, which regions are suitable for electrical contacting of electronic elements to be assembled together with the insulating body, said body acting as a carrier of the conductor pattern and as a carrier of the elements.

2. (Original) An electrically insulating body as claimed in claim 1, characterized in that a cavity or opening is present in the body for mounting an electronic element.

3. (Original) An electrically insulating body as claimed in claim 2, characterized in that the cavity has a bottom and a side wall, the conductor pattern extending over the side wall and optionally over the bottom of the cavity, while a connection region for electrical contacting of the electronic element is present in the cavity.

4. (Original) An electrically insulating body as claimed in claim 2, characterized in that the opening extends from the first side through to a third side facing away from the first side, such that a first component can be placed at the first side and a

second component can be placed at the third side, which components together with the interposed body define an electronic element.

5. (Previously Presented) An electrically insulating body as claimed in claim 1, characterized in that at least a number of the strip-shaped conductors is provided with respective regions at respective ends, which regions act as connection regions and are located in a closed, preferably rectangular arrangement.

6. (Previously Presented) An electrically insulating body as claimed in claim 1, characterized in that

the body has a third side which faces away from the first side, and

the conductor pattern extends from the first side over the second side onto the third side.

7. (Original) An electrically insulating body as claimed in claim 1, characterized in that at least a number of the strip-shaped conductors have respective strip-shaped ends, said ends being at least substantially oriented in parallel and present at the first side.

8. (Original) An electrically insulating body as claimed in claim 1, characterized in that the strip-shaped conductors have a width of between 10 and 500 μm .

9. (Previously Presented) An electronic device provided with an electronic element and with an electrically insulating body provided with a conductor pattern as claimed in claim 1.

10. (Original) An electronic device as claimed in claim 9, characterized in that the electrically insulating body as defined in claim 4 is present, wherein the first component is a photosensitive semiconductor element and the second component is an optical lens, together defining a camera.

11. (Previously Presented) An electronic device as claimed in claim 10, characterized in that

 a display is present which is electrically and mechanically connected to the electrically insulating body, and

 the conductor pattern is constructed such that signals from the photosensitive semiconductor element can be transmitted to the display.

12. (Previously Presented) An apparatus for mobile communication provided with an electronic device as claimed in claim 9.

13. (Previously Presented) An electrically insulating body as claimed in claim 4, characterized in that at least a number of the strip-shaped conductors is provided with respective regions at respective ends, which regions act as connection regions and are located in a closed, preferably rectangular arrangement.

Evidence Appendix:

There is no evidence which had been submitted under 37 C.F.R. §§ 1.130, 1.131 or 1.132 or any other evidence entered by the Examiner and relied upon by Appellant in this Appeal.

Related Proceedings Appendix:

Because there are no related proceedings identified herein, there are no decisions rendered by a court or the Board in any proceedings identified pursuant to paragraph c(1)(ii) of 37 C.F.R. § 41.37.